

**Before the**  
**FEDERAL COMMUNICATIONS COMMISSION**  
**Washington, D.C. 20554**

In the Matter of	)	
	)	
Former Nextel Communications, Inc. Upper	)	WT Docket No. 06-169
700 MHz Guard Band Licenses and Revisions	)	
to Part 27 of the Commission's Rules	)	
	)	
Development of Operational, Technical and	)	
Spectrum Requirements for Meeting Federal,	)	WT Docket No. 96-86
State and Local Public Safety Communications	)	
Requirements Through the Year 2010	)	

**Comments of the**  
**New York State Office for Technology**  
**Statewide Wireless Network (SWN)**  
**November 6, 2006**

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## **I. INTRODUCTION**

1. The New York State Office for Technology (NYS-OFT), on behalf of the State of New York, is in the process of deploying a state-of-the-art Statewide Wireless Network (SWN) for all State, Federal and Local Governmental entities that operate within New York State's geographic borders. The New York State SWN will provide an integrated mobile radio communications network that will be utilized by both Public Safety and Public Service agencies in New York State. It will have a digital, trunked architecture with both voice and data capabilities, and will be used in day-to-day operations, and disaster and emergency situations, to more effectively and efficiently coordinate the deployment of all levels of government resources to such incidents. It will also enhance international coordination along the US/Canadian border, and play a critical role in supporting the homeland defense efforts within the State of New York.
2. The SWN network will be operational in both Canadian border and non-Canadian border regions of New York State as early as the beginning of 2007, using both 700 and 800 MHz spectrum. Because of this, New York State is a significant stakeholder in the outcome of these 700 MHz decisions before the Commission.
3. NYS-OFT hereby submits Reply Comments in the above-referenced proceeding. First and foremost, the State wishes to thank the Commission for opening up such an important proceeding at such a critical juncture in the deployment of 700-MHz technologies and systems.

4. As seen in the Comments recently received in this proceeding, the latest incarnation of the broadband optimization plan<sup>1</sup> (BOP), hereafter referred to as the Modified Broadband Optimization Plan, or M-BOP, addresses most if not all of the major concerns held by the public safety community with regards to the implementation of such a plan — providing a path to resolving the financial issues related to retuning and reprogramming deployed equipment, as well as dealing with the logistics and constraints imposed by border-area operations.
5. Several SWN representatives have been heavily involved with the ad-hoc coalition of stakeholders<sup>2</sup> (hereafter referred to as Technical Working Group, or TWG) that collaborated on the development of the M-BOP in order to maximize the overall benefits to public safety and to forge consensus among other stakeholders, so as to expeditiously move these matters forward. It should be noted that SWN's representatives participated in this TWG to be an advocate for ALL public safety entities, and that throughout their participation the representatives mandated that any solution proposed by the TWG must benefit ANY public safety entity. Accordingly, the flexibility to meet diverse requirements and operations was inherent in the final solution(s) developed by the TWG.
6. In short, NYS-OFT recognizes and agrees that a Modified Broadband Optimization Plan<sup>3</sup> (M-BOP) for 700 MHz provides the best opportunity — of all the proposals put forward before the Commission — to maximize public safety operations and minimize interference.

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<sup>1</sup> Comments and the Report of the 700-MHz Technical Working Group, both filed by Access Spectrum, LLC and Pegasus Communications Corp, October 23, 2006.

<sup>2</sup> Including NPSTC, the State of New York, M/A-COM, Motorola, Access Spectrum, and Pegasus Communications.

<sup>3</sup> As initially proposed by Access Spectrum and Pegasus Communications

7. NYS-OFT would also like to go on the record as clearly stating that we are NOT at this time supportive of the “*Commercial 700 MHz*” plan as proposed by Access Spectrum, Pegasus Communications, Columbia Capital and Telecom Ventures; as this proposal has not yet been reviewed/analyzed by the Technical Working Group’s public safety participants. The State encourages continued dialog on this proposal – but notes that a critical aspect of its success would hinge upon whether the required power flux density restrictions would transfer from the A-Block license under the M-BOP to the modified C&D block licenses under the proposed “*Commercial 700 MHz*” plan.

## II. GUARD BAND RULES

8. Under CFR 47 §27.2(b)<sup>4</sup>, the Commission prohibits upper-700-MHz Guard Band licensees from deploying cellular operations, where such operations are defined as “*consists(ing) of many small areas or cells (segmented from a larger geographic service area), each of which uses its own base station, to enable frequencies to be reused at relatively short distances*”. This requirement is clearly intended to mitigate the mixed-design issues between cellular interference-limited systems and public safety noise-limited systems that led to widespread interference in the 800-MHz bands.
9. NYS-OFT feels that the current prohibition on cellular operations does NOT best capture the effects necessary to coordinate operations and to minimize interference. The State suggests that, under an M-BOP, this prohibition could be eliminated, if appropriate “on-the-ground” power flux density (PFD) limitations on guard-band operations are established for guard-band deployments. NYS-OFT also feels that Time Division Duplex (TDD) operations should be prohibited on ALL guard-band spectrum blocks. In fact, the

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<sup>4</sup> §27.2 Permissible communications

State feels strongly that allowing TDD on the upper-700-MHz C/D Blocks will inevitably lead to interference to public safety operations — especially at major disaster scenes at which public safety operations are attempting to communicate within high-density cellular subscriber unit areas where C/D Block spectrum is utilized as well.

10. A reasonable and proper PFD limitation, measured at the ground, would provide both intermodulation (IM) and receiver-overload (OL) protection from guard-band operations to public safety operations, and would provide a consistent worst-case assessment of the environment against which public safety systems could be designed. Representatives from NYS-OFT are currently working with the TWG to determine what the consensus PFD level should be.
11. The FCC also specifies adjacent-channel power (ACP) limitations on guard-band operations, as opposed to the out-of-band-emission (OOBE) restrictions placed on the C and D block upper-700-MHz licensees. In the past, it has proved problematic<sup>5</sup> to compare the interference potential from the guard-band ACP restrictions to the C/D Block OOBE limitations, as these restrictions should necessarily be equivalent when looking at the edge of the public safety allocations. For this reason, the State recommends that appropriate OOBE limits replace the current ACP restrictions for guard-band licensees. The State is also currently working with the TWG to determine what the consensus OOBE level should be.
12. Again, the State is NOT at this time supportive of the “*Commercial 700 MHz*” plan as proposed by Access Spectrum, Pegasus Communications, Columbia Capital and Telecom Ventures; as this proposal has not yet been vetted through the Technical Working

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<sup>5</sup> As shown in the differences in interference levels, as discussed in earlier filings on this docket among Lucent, Motorola, Qualcomm, NPSTC, and many others.

Group's public safety participants. Further, NYS-OFT notes that a critical aspect of its success would hinge upon whether the required power flux density restrictions would transfer from the A-Block license under the M-BOP to the modified C&D block licenses under the proposed "*Commercial 700 MHz*" plan.

### III. 700-MHZ BAND RESTRUCTURING

13. One of the most important areas for which the Commission seeks comment at this time concerns the approach suggested by various proposals<sup>6</sup> to restructure the 700-MHz band public safety allocation in order to maximize operational flexibility and capacity, while minimizing interference and coordination complexity. The State feels very strongly that the 700-MHz band *should* be restructured, and that a lack of action on this restructuring at this point would lead to a certain need for 700 MHz "rebanding" in the future. Further, this restructuring should be undertaken immediately, before the band is heavily utilized by public safety entities in their daily operations. Further, the additional spectrum that would be made available to support public safety operations under the M-BOP would offer substantially enhanced capabilities to public safety entities in all areas of the country. In fact, there is no other plan (including NPSTC's) that would offer *any* opportunity for broadband technology deployments in the U.S.-Canadian-border Regions.
14. Although NYS-OFT is a strong advocate of 700-MHz restructuring, there are several conditions that must be accepted before such a restructuring could commence: 1) **the restructuring must pose no financial cost to public safety entities**, and 2) **the**

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<sup>6</sup> M/A-COM, State of Hawaii, Access Spectrum, Pegasus Communications, Qualcomm, Northrop Grumman, and 700-MHz Regions 24, 26, 39, and 45.

**restructuring plan must provide operational continuity and be realizable in the border Regions.**

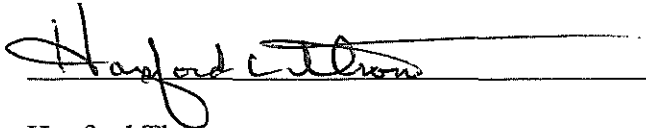
15. In order to meet Condition 1, the Guard Band Managers have already stepped up to bear these costs. It is now up to the Commission and Department of State to resolve the other, Condition 2 matters. It has been clearly shown that the M-BOP is not only a workable solution in the U.S.-Canadian-border Regions, but also a critical one — since the additional spectrum offers precious additional capacity to the spectrum-starved border areas. It should also be noted that any renegotiation of the Canadian LoU would need to address coexistence issues between broadband public safety services in the U.S. and digital and analog broadcast services in Canada.
16. NYS-OFT understands that the band restructuring may lag behind SWN's deployment, and thus may necessitate some retuning and or reprogramming of SWN assets – in fact New York's SWN will likely bear the largest impacts nationally in this regard. Despite this NYS-OFT considers the M-BOP to be a necessary proactive measure against 700 MHZ interference and a source of much needed additional public safety spectrum. Therefore the end more than justifies the means at this critical juncture in time. Of course, the State also expects to be reimbursed for all retuning, reprogramming, and logistical costs incurred as a result of the band restructuring.
17. In order to resolve these issues in an equitable manner, the State has actively participated in the previously mentioned TWG with other stakeholders. NYS-OFT feels that M-BOP offers equitable solutions to both of these issues, and that these are achievable within the necessary timeframes for effective and timely (over the next 12-14 months) restructuring and international harmonization of the restructured band.



#### IV. SUMMARY

18. In closing, NYS-OFT applauds the Commission's efforts to examine these important issues at such a critical juncture in 700-MHz deployment. We believe that the 700-MHz allocation must be structured and deployed for maximum efficiency, and in such a manner that diverse technologies can be deployed and coordinated without harmful interference. These basic principles will help enable America's first responders to better serve the public and protect the security of our homeland.
19. The M-BOP offers the deployment flexibility and additional spectrum that public safety needs — especially in the U.S.-Canadian-border Regions. It also offers the only true path to enabling broadband aggregation in these areas.
20. NYS-OFT understands that the band restructuring may lag behind SWN's deployment, and thus may necessitate some retuning and or reprogramming of SWN assets – in fact New York's SWN will likely bear the largest impacts nationally in this regard. Despite this NYS-OFT considers the M-BOP to be a necessary proactive measure against 700 MHz interference and a source of much needed additional public safety spectrum. Therefore the end more than justifies the means at this critical juncture in time.
21. Finally, the State is NOT at this time supportive of the "*Commercial 700 MHz*" plan as proposed by Access Spectrum, Pegasus Communications, Columbia Capital and Telecom Ventures. NYS-OFT encourages continued dialog on this proposal – but notes that a one critical aspect of its success would hinge upon whether the required power flux density restrictions would transfer from the A-Block license under the M-BOP to the modified C&D block licenses under the proposed "*Commercial 700 MHz*" plan.

Respectfully Submitted,

A handwritten signature in dark ink, appearing to read "Hanford Thomas", is written over a horizontal line.

Hanford Thomas

Director New York State Statewide Wireless Network

New York State Office for Technology

November 6, 2006